3rd Qtr

GOAL #1: Clean & Safe Water **Program #4500: Surface Water Regulation**
Objective #3: Reduce pollutant loading to surface water.

TASK/ GRANT	OUTPUT DESCRIPTION	EVALUATION, DATE OR QUANTITY T=TARGET A=ACTUAL	RESPONSIBLE SECTION/ STAFF
1.3.9	**TASK: TMDL Analyses** Oversee Total Maximum Daily load (TMDL) efforts and conduct TMDLs and related analyses. **DELIVERABLES:**		
NPS IX PPG	1) a) Provide Quarterly TMDL Project Status Table updates on TMDL progress. b) Submit TMDL Reports to EPA for approval; Complete 23 TMDLs on 19 waterbodies in FY 09.	a) T = Quarterly b) T = 6/09	Surface Water
NPS X PPG	2) a) Continue collecting water quality data for TMDL development and provide status Table Updates each quarter. b) Monitor 30 TMDLs on 17 waterbodies (see Continued Monitoring status table).	a) T = Quarterly T = 6/09 .	Surface Water

EXCEPTION REPORT COMMENTS
(Info Needed: On-Target, Off-Target, Completed or N/A (No Activity). If "Off Target", please explain why.

1ST QTR:
See Quarterly Status report for project details. Deliverable #1; off-target for submittals due to EPA 9/08, see Project Completion status table updates. Deliverable #2; on-target for monitoring for projects under development, see Continued Monitoring status table updates. All others on target.
2ND QTR:
See Quarterly Status report for project details.
3RD QTR:
See Quarterly Status report for project details.

FTE FUNDING SOURCE	MONTHS	AMOUNT
GFS (SW)	9.50	37,314
GFS (SW) NPS IX	11.86	43,816
GFS (SW) NPS X	8.50	36,489
WQARF NPS X	20.50	70,285
PPG	20.50	70,285
NPS Impl IX	26.94	99,897
NPS Impl X	15.00	59,545
TOTAL	112.80	417,631

Include Target Completion Date!

TMDL PROJECTS QUARTERLY STATUS
1.3.9 TMDL Development – Project Completion by June 2009

Segment	Impairment	Project Manager	Comments
Alamo Lake	Hg in Fish Tissue	stf	Q1-intial attempts to rerun the model with new soil concentrations have failed; deposition rates used in original model will need to be compared to the new REMSAD Tagging model. Q2- request has been made to EPA to fund model rerun include updated soil and atmospheric data Q3- Tetra Tech was awarded contract to rerun the WCS model using recent soil data to determine approximate natural watershed contributions, results expected by end April.
Parker Canyon Lake	Hg in Fish Tissue	ldl	Q1- modeling report has not been completed, expected by 11/1; new REMSAD Tagging and Tekran data will be incorporated into model. Q2- modeling report has not been completed, TMDL development is delayed until modeling is completed Q3- Preliminary modeling results have been reviewed and refinement of the model continues, results expected in Q4 along with a draft TMDL report.
Pinto Creek- headwaters to Ripper Spring	Cu	gso	Q1- SSS has been slightly revised based on additional field observations; SSS will be part of a special rule making process with TMDL to follow. Q2- special rule making is delayed slightly, TMDL will begin to be drafted in Q3 Q3- Malcolm Pirnie will finalized SSS modeling rerun and calculate TMDL numbers in Q4.
Pinto Creek- Ripper Spring to Roosevelt Lake	Cu	gso	Q1- same as above Q2- same as above Q3- same as above
Lower Lake Mary	Hg in Fish Tissue Mercury	stf	Q1- model rerun is required based upon new REMSAD Tagging model and Tekran data analysis results; consultation with consultant is forthcoming; results expected in Q2. Q2- modeling was delayed but is expected to be completed by the end of January Q3- Malcolm Pirnie has completed updating the lakes models and issues the final report; TMDL is being redrafted with completion in Q4 anticipated.
Lower Long Lake	Hg in Fish Tissue	stf	Q1- see lower Lake Mary Q2- see Lower Lake Mary Q2- see Lower Lake Mary

602-771-4468

Mule Gulch- headwaters to Above Lavender Pit	Cu	gso	Q1- natural background modeling is underway; results expected in Q2 Q2- modeling was not completed in Q2 Q3- additional soil data was reviewed in Q3 and will be incorporated into SSS modeling effort
Mule Gulch- Above Lavender Pit to Bisbee WWTP	Cu, pH	gso	Q1- see above Q2- see above Q3- see above
Mule Gulch- WWTP to Highway Bridge	Cd, Cu, pH, Zn	gso	Q1- see above Q2- see above Q3- see above
[redacted]iver- New Mexico Border to Bitter	Sediment Add *E. coli*- Q1	dm4	EPA approval by 9/2008 Q1- draft TMDL is complete, submittal to EPA by Spring 09; *E. coli* TMDL draft 75% complete. Q2- both TMDLs have been drafted and are under internal review. Public comment period will take place in Q3. Q3- internal review took longer than expected but has been completed; public comment period with be initiated in Q4.
Gila River- Bonita Creek to Yuma Wash	Sediment Add *E. coli*- Q1	dm4	EPA approval by 9/2008 Q1- draft TMDL is complete, submittal to EPA by Spring 09; *E. coli* TMDL draft 75% complete Q2- see above Q3- see above
Oak Creek- Headwaters to West Fork Oak Creek	*E. coli*	js9	EPA approval by 9/2008 Q1- data analysis underway; expected submittal by summer 2009 Q2- additional storm data was collected; flow duration curves have been completed and conversion to load duration curves is underway. Q3- Load Duration Curve development has continued, completion anticipated in Q4.
Oak Creek- West Fork Oak Creek to tributary (3[redacted]/1114513)	*E. coli*	js9	EPA approval by 9/2008 Q1- see above Q2- see above Q3- see above
Oak Creek- Tributary (345709/1114513) to below SRSP Slide Rock	*E. coli*	js9	EPA approval by 9/2008 Q1- see above Q2- see above Q3- see above
Oak Creek- below SRSP to Dry Creek	*E. coli*	js9	EPA approval by 9/2008 Q1-see above Q2- see above Q3- see above
Oak Creek- Dry Creek to Spring Creek	*E. coli*	js9	EPA approval by 9/2008

			Q1- see above Q2- see above Q3- see above
Queen Creek- headwaters to Superior WWTP	Cu	kwp	EPA approval by 9/2008 Q1- hydrologic model is being calibrated; chemistry will be run in Q2, likely to EPA in Spring 09 Q2- final data QA/QC has been completed; calibration of chemistry will take place in Q3. Q3- initial chemical runs have been completed; refinement of concentrations for various land uses and mines continues.
Queen Creek- Superior WWTP to Potts Canyon	Cu	kwp	EPA approval by 9/2008 Q1- see above Q2- see above Q3- see above
Soldiers Lake	Hg in Fish Tissue	stf	Q1- see lower Lake Mary Q2- see Lower Lake Mary Q3- see Lower Lake Mary
Soldiers Annex Lake	Hg in Fish Tissue mercury	stf	Q1- see lower Lake Mary Q2- see Lower Lake Mary Q3- see Lower Lake Mary
Upper Lake Mary	Hg in Fish Tissue mercury	stf	Q1- see lower Lake Mary Q2- see Lower Lake Mary Q3- see Lower Lake Mary

Redo

E.coli Bacteria TMDL?

Continued Monitoring for TMDL Development

Segment	Impairment	Project Manager	Comments
Alvord Lake	Ammonia	ds	Q1- high production seasonal sampling completed (2 events) to compare with proposed Narrative Nutrient Lakes Standard Q2- one more round of samples were collected Q3- "off-season" sampling was completed in February.
Chaparral Lake	Low D.O., *E. coli*	ds	Q1- high production seasonal sampling completed (2 events) to compare with proposed Narrative Nutrient Lakes Standard Q2- one more round of samples were collected Q3- "off-season" sampling was completed in February.
Colorado River- Lake Powell to Paria River	Se	ldl	Q1-loss of Colorado staff member has delayed development of this study Q2- no action on project Q3- no action on project
Colorado River- Parashant Canyon to Diamond Creek	Se, SSC	ldl	Q1-loss of Colorado staff member has delayed development of this study Q2- no action on project Q3- no action on project
Colorado River- Hoover Dam to Lake Mohave	Se	ldl	Q1- loss of Colorado staff member has delayed development of this study Q2- no action on project Q3- no action on project
Colorado River- Main Canal to Mexico Border	Se, low D.O.	ldl	Q1- loss of Colorado staff member has delayed development of this study Q2- no action on project Q3- no action on project
Cortez Park Lake	Low D.O., high pH	ds	Q1- high production seasonal sampling completed (2 events) to compare with proposed Narrative Nutrient Lakes Standard Q2- one more round of samples were collected. Q3- "off-season" sampling was completed in February
Crescent Lake	High pH	db10	Q1- initial site recon and data analysis were begun; loss of staff will delay future work Q2- no action on project Q3- no action on project
East Verde River- American Gulch to Verde River	As, B	kwp	Q1- SAP development should commence in Q2 - no action on project Q3- Preliminary SAP development has begun
Gila River- Centennial Wash to Gillespie Dam	B, Se	kwp	Q1- development of this study will begin in Q2- no action on project Q3- no action on project
Little Colorado River- Silver Creek to	*E. coli*	dm4	Q1-sampling has begun with 2 events

Carr Wash			collected through summer season, automatic samplers have been installed to aid in storm sampling Q2- additional sampling occurred Q3- spring snow melt and winter baseflow sampling occurred
Little Colorado River- Porter Tank to McDonalds Wash	Cu, Ag, SSC	dm4	Q1- see LCR above Q2- see LCR above, no exceedances of the Cu or Ag standards have been observed, although other metal exceedances have been measured Q3- spring snow melt and winter baseflow sampling occurred
Paria River- Utah Border to Colorado River	*E. coli*, SSC	ldl	Q1- National Park Service collected *E. coli* samples throughout the summer, consultation with Utah and analysis of USGS data has occurred; loss of Colorado River staff will slow project development Q2- no action on project Q3- no action on project.
Santa Cruz River- Mexico Border to Nogales Inter WWTP	*E. coli*	cb9	Q1-sampling has begun with base flow samples collected; coordinating efforts with volunteer group Q2- no additional samples were collected Q3- Coldwater baseflow sampling was completed in January
San Pedro River- Aravaipa Creek to Gila River	*E. coli*, Se	cb9	Q1- several events were sampled during the summer monsoon season; high sediment load resulted in high reporting limits (above standard) for selenium Q2- cold water baseflow sampling was completed Q3- no action on project
Watson Lake	Nitrogen, low D.O., high pH	stf	Q1- SAP is being finalized, no additional samples were collected in Q1 Q2- one storm runoff sampling event was completed Q3- spring runoff sampling occurred

Performance Measure SP-12 (W) Updates: ***Improve water quality conditions in impaired watersheds nationwide using the watershed approach.***

Turkey Creek	Q1 - No additional samples were collected in the first quarter. Additional sample collection is needed to determine lead source in the upper and potentially the lower watershed. Results collected to date have not shown any exceedances of the total or dissolved copper standards, hopefully additional samples with confirm that copper is no longer impairing Turkey Creek. Q2- One round of storm runoff samples were collected in Q2, we awaiting lab results. Q3- another round of samples was collected in February, no copper exceedances were observed.
Pinto Creek	Q1 - No additional samples were collected in the first quarter. The Franciscan Friars are moving forward with their remediation plans for the Mineral Creek side of the Gibson mine site. Q2 - no additional samples were collected. Q3- no additional samples were collected.
Alum Gulch	Q1 - Summer baseflow samples were collected with no improvement in water quality observed-low pH and high metals were measured in all samples. Remediation of adit points sources would improve water quality near those source but the numerous sources (i.e. seeps from underground workings) contributing to the baseflow will continue to degrade water quality. Five auto samplers were installed to aid in storm sampling but limited runoff samples were collected resulting in insufficient data to measure remedial success under storm conditions. Staff met with USFS personnel and a USFS contractor to tour the watershed and discuss sampling efforts. Q2- No watershed wide sampling occurred in Q2. ASARCO has proposed using evaporation ponds to contain/treat the January Adit discharge. This action may reduce the baseflow to the upper portion of the watershed. Q3- no additional samples were collected. Autosamplers remain in place to target stormwater runoff.
Boulder Creek	Q1 - ADEQ Wastes Program and EPA R9 continue to explore potential of 3rd party waiver to accept Hillside tailings material. No measure of effectiveness will begin until some remedial action takes place. The Hillside adit continues to discharge into Boulder Creek. Consultation between the MTP owner and ADEQ compliance section is ongoing. Q2- No progress to report on the waiver. ADEQ Waste Programs is still coordinating with EPA R IX and headquarters. Q3- No progress has been made regarding the waiver or other potential remedies.

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Objective #3: Reduce pollutant loading to surface water.

TASK/ GRANT	OUTPUT DESCRIPTION	EVALUATION, DATE OR QUANTITY T=TARGET A=ACTUAL	RESPONSIBLE SECTION/ STAFF
1.3.10	**TASK: TMDL Implementation Plan** Develop TMDL implementation plans in support of approved TMDL projects. **DELIVERABLES:**		
NPS IX	1) a) Update TMDL Implementation Plans Status Table each quarter. b) Complete 6 TIP plans in FY 09.	a) T = Quarterly b) 6/09	Surface Water
NPS X	2) a) Conduct effectiveness monitoring on the 4 Performance Measure waterbodies in addition to 4 others in FY 09 (see Effectiveness Monitoring status table). b) Complete 6 TIP plans in FY 09.	a) T = 6/09 b) T = Quarterly	Surface Water

EXCEPTION REPORT COMMENTS
(Info Needed: On-Target, Off-Target, Completed or N/A (No Activity). If "Off Target", please explain why.

1ST QTR:
Deliverable # 1(b) off-target; development of TIPs has slowed due to delays in finalizing TMDLs; see Develop Implementation Plan status table. Deliverable #2 on-target; see Effectiveness Monitoring status table for updates.
2ND QTR:
See Quarterly Status report for project details
3RD QTR:
See Quarterly Status report for project details

FTE FUNDING SOURCE	MONTHS	AMOUNT
NPS Impl IX	17.00	60,670
NPS Impl X	2.50	8,646
GFS (SW) NPS X	4.50	18,791
TOTAL	24.00	88,107

FY09 - TMDL IMPLEMENTATION PLANS TO BE DEVELOPED (TIPS)

Segment	Target Completion Date	Project Manager	Comments
Alamo Lake	8/08	ks10	Q1- off target; awaiting new modeling data Q2- off target, awaiting for updated modeling results
Lake Mary Region	7/08	ks10	Q1- off target; awaiting new modeling data Q2- off target, awaiting for updated modeling results
Mule Gulch	4/09	ks10	Q1- no action in Q1 Q2- no action
Oak Creek	9/08	ks10	Q1- off target, development will begin in Q2 Q2- TMDL analyses has begun, TIP will be drafted in Q3
Pinto Creek	10/08	ks10	Q1- no action in Q1, likely will not begin until Q3 after completion of draft TMDL Q2- off target, TMDL has not been drafted
Queen Creek	9/08	ks10	Q1- off target, development will begin upon completion of modeling effort Q2- off target, modeling has not been completed

FY09 - EFFECTIVENESS MONITORING

Segment	Impairment	Project Manager	Comments
Alum Gulch	Cd, Cu, Zn, pH	sd4	Measure W Q1- summer baseflow samples were collected with no improvement in WQ observed; auto samplers were installed to aid in storm sampling; limited runoff samples were collected; insufficient data collected to date to measure remedial success Q2- no watershed wide sampling occurred in Q2, ASARCO has proposed using evaporation ponds to contain the January Audit discharge
Boulder Creek	As, Cu, Zn	sd4	Measure W Q1- ADEQ Wastes Program and EPA R9 continue to explore potential of 3rd party waiver to accept Hillside tailings material Q2- not action on project
Pinto Creek	Cu	sd4	Measure W Q1- no additional samples were collected in Q1 Q2- no additional samples were collected in Q2

FY09 - EFFECTIVENESS MONITORING (Cont'd)

Rainbow Lake	Nutrients	sd4	Q1- completed sampling high production season in-lake and watershed sampling; comparison to TMDL conditions will commence once lab results are received Q2- no additional samples were collected, work continues with watershed group to determine best management practices that can be implemented
Tonto Creek	E.coli/Nitrogen	sd4	Q1- completed summer recreational season sampling; comparison to TMDL conditions will begin upon receipts of lab results Q2- no additional sampling occurred in Q2, data analysis continues
Turkey Creek	Cu, Pb	sd4	Measure W Q1- no samples were collected in Q1 Q2- one round of storm runoff samples were collected in Q2, awaiting lab results
Verde River	Turbidity	sd4	Q1- no samples were collected in Q1; sampling will commence in Q2 Q2- no samples were collected in Q2
Little Colorado River	Turbidity	sd4	Q1- no additional samples were collected in Q1 Q2- no additional samples were collected in Q2

Plan B 2012